

**ABSTRACT**

An Ethernet MAC OAMP Control sublayer is provided for supporting SDH/SONET OAMP standard functionality in Ethernet Networks. In accordance with  
5 one embodiment, an Ethernet MAC OAMP Control sublayer is provided for processing Ethernet MAC OAMP Control frames. The MAC OAMP Control sublayer provides support for a MAC OAMP Client to implement all of the SDH/SONET OAMP standard functionality. The MAC OAMP Control frame provides support for SDH/SONET  
10 OAMP on Ethernet networks. The Network Equipment can use the MAC OAMP Control frames to communicate with the downstream and upstream Network Equipment about various OAMP events, requests, performance parameters, communications channels, maintenance, and test functionality.